

REMARKS

Claims 13-25 were pending in the application. Claims 13, 16 and 25 have been amended. Upon entry of these amendments, Claims 13-25 will be pending and under active consideration. Claims 13 and 25 are independent.

The amendments are supported fully by the claims and/or specification as originally filed and, thus, do not represent new subject matter.

Claim 1 is amended herein to recite "poly- α -glucan, poly-1,3- β -glucan, or mixtures thereof." The amendment of Claim 1 finds support in the specification at page 7, lines 26-30.

Claim 16 is amended to recite that the microspheres of the present invention as claimed are present in the oral hygiene product, as required by Examiner. This amendment finds support throughout the specification and claims, as filed, for example at Claim 1.

Claim 25 has been amended to point out more particularly and claim more distinctly that which Applicants regard as their invention by now reciting "unbranched poly- α -glucan; poly-1,3- β -glucan, or mixtures thereof." The amendment of Claim 25 finds support in the specification at page 7, lines 26-30.

Applicants respectfully request entry of the amendments and remarks made herein into the file history of the present invention. Reconsideration and withdrawal of the rejections set forth in the above-identified Office Action are respectfully requested.

I. The Rejection Under 35 U.S.C. § 102(a)

At page 3 of the Office Action, Claims 13-25 are rejected under 35 U.S.C. § 102(a) as being anticipated by Bengs *et al.* (WO 99/38594; hereinafter, '594) or Bengs *et al.*

(WO 99/11695; hereinafter '695) or Bengs *et al.* (WO 99/52558; hereinafter, '558) or Bengs *et al.* (WO 99/52506; hereinafter, '506)(hereinafter, jointly, the "References"). The Office Action alleges that the References all teach the instant water insoluble, linear polyglucan microspheres within the instant diameter, and that Applicants cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 C.F.R. § 1.55. Applicants traverse respectfully.

Applicants request respectfully that the 35 U.S.C. § 102(a) rejection of Claims 13-25 be held in abeyance pending Applicants' provision of an English translation of the foreign priority document, German Patent Application 198 60 373.8, filed December 28, 1998, which predates the publication of the References and would, thus, overcome the 35 U.S.C. § 102(a) rejection based on the References.

II. The Rejections Under 35 U.S.C. § 102(b) Should Be Withdrawn

The Office Action, at page 3, rejects Claims 13-14, 16, and 18-25 as allegedly being anticipated by Haywood *et al.* (WO 95/34275; hereinafter, "Haywood") in combination with Voet and Voet (Biochemistry, John Wiley and Sons, 1990), under 35 U.S.C. § 102(b). The Office Action alleges that Haywood discloses an oral hygiene composition comprising cellulose spherical particles having a diameter within the instant range. The Office Action acknowledges that Haywood does not disclose that the cellulose particles are water-insoluble and unbranched, but the Office Action asserts that Voet and Voet is relied upon for allegedly disclosing that this is an inherent characteristic of cellulose. Applicant traverses respectfully.

Applicants submit respectfully that Claim 13-14, 16, and 18-25, as amended, are not anticipated by Haywood because Haywood does not disclose an oral hygiene product comprising poly- α -glucan, poly-1,3- β -glucan, or mixtures thereof, as claimed in Applicants' claims, as amended. As noted by the Office Action, Haywood discloses an oral hygiene composition comprising cellulose spherical particles. As one skilled in the art will recognize, cellulose is a poly-1,4- β -glucan (see page 1, lines 22-23 of the present specification). As Examiner is no doubt well aware, a reference must disclose each and every element of Applicants' claimed invention, either explicitly or inherently, to support a *prima facie* holding of anticipation under 35 U.S.C. § 102(b). Thus, Applicants submit respectfully that Haywood does not disclose, either explicitly or inherently, the oral hygiene product comprising poly- α -glucan, poly-1,3- β -glucan, or mixtures thereof, as claimed in the present application, as amended. Further, Applicants note respectfully that Voet and Voet does not cure this deficiency, nor does the Office Action allege that Voet and Voet cures this deficiency.

Accordingly, Applicants submit respectfully that the Claims 13-14, 16, and 18-25 of the present invention, as amended, are not anticipated by Haywood, either alone or in view of Voet and Voet, and that the rejection to Claims 13-14, 16, and 18-25 under 35 U.S.C. § 102(b) has been overcome. Applicants request respectfully that the rejection to Claims 13-14, 16, and 18-25 under 35 U.S.C. § 102(b) be withdrawn.

III. The Rejections Under 35 U.S.C. § 103(a) Should Be Withdrawn

The Office Action, at pages 4-5, rejects Claims 15 and 17 as allegedly being obvious over Haywood, in view of Voet and Voet, and further in view of Kossman (WO 95/31553; hereinafter, "Kossman"), under 35 U.S.C. § 103(a). The Office Action asserts that

Haywood teaches an oral hygiene composition comprising cellulose spherical particles having a diameter within the instant range, and that Voet and Voet disclose that cellulose particles are water-insoluble and unbranched. The Office Action acknowledges that Haywood does not teach that the depth of irregularities on the surface of the microparticle is at most 20% of the mean diameter of the microparticles nor the specific polyglucans of instant Claim 17. However, the Office Action alleges that Haywood does teach the same use and, therefore, the limitations of instant Claim 15 allegedly do not appear to be critical. The Office Action alleges further that Kossman teaches that alpha-1,4-glucan has the same properties as cellulose and, accordingly, it would allegedly have been obvious to one skilled in the art at the time of the invention to substitute alpha-1,4-glucan for the cellulose in Haywood. Applicants traverse respectfully.

Applicants submit respectfully that the novel microparticles of the present invention as claimed, comprised of at least one water-insoluble unbranched poly- α -glucan, poly-1,3- β -glucan, or mixtures thereof, are neither taught nor suggested by Haywood, either alone or in view of Voet and Voet and further in view of Kossman. Applicants submit respectfully that, contrary to the allegations of the Office Action, there is neither teaching nor suggestion in these references that microparticles of cellulose would have the same properties as the polyglucan microparticles of Applicants' claimed invention.

Applicants respectfully direct the Examiner's attention to Kossman, page 1, last full paragraph, which is alleged to teach that alpha-1,4-glucan has the same properties as cellulose. The complete quote recites, "One has succeeded in producing *fibers* from amylose *whose properties are similar to* those of natural cellulose *fibers* and which allow to partially or even completely replace them in the production of paper" (emphasis added). Applicants submit respectfully that one skilled in the art is *not* taught by this passage from Kossman that amylose

has the same properties as cellulose. To the contrary, Applicants submit respectfully that Kossman is stating merely that it is *possible* to make *fibers* of amylose that have similar properties as *fibers* of cellulose. There is neither teaching nor suggestion in Kossman that *microparticles* of amylose will have the same properties as *microparticles* of cellulose. Thus, Applicants submit respectfully that Kossman does not cure the deficiencies of Haywood.

Furthermore, by stating “[o]ne has succeeded in producing,” Kossman suggests that special skill is required to make amylose fibers that have similar properties as natural cellulose fibers and that ordinary strands of amylose would not have the same properties as cellulose fibers. Thus, Applicants submit respectfully that, implicitly, Kossman teaches away from amylose having the same properties as cellulose. Applicants submit respectfully that no reference that teaches away from Applicants’ claimed invention may be combined permissibly with another reference to produce Applicants’ claimed invention for the purpose of rendering Applicants’ claimed invention obvious over the combination.

Even further, the Office Action suggests that motivation to combine Kossman with Haywood is provided where the alpha-1,4-glucan is more available than cellulose. It is well known that a motivation to combine references is essential in establishing a *prima facie* case of obviousness under 35 U.S.C. § 103(a) by the combination of references. However, Applicants submit respectfully that the Office Action makes this allegation of motivation without support for the motivation in any of the cited references. Applicants careful reading of the references does not reveal any teaching or suggestion that alpha-1,4-glucan might be more available than cellulose. Furthermore, Applicants submit respectfully that, given the ubiquity of cellulose in plant material worldwide, it is inconceivable that the supply of cellulose might ever become so

limited in comparison to the supply of amylose as to motivate one skilled in the art to substitute cellulose for the polyglucans of Applicants' claimed invention.

Thus, Applicants submit respectfully that, the combination of Kossman with Haywood is improper. Alternatively, Applicants submit respectfully that neither Voet and Voet nor Kossman cure the deficiencies of Haywood with respect to Claims 15 and 17 of the present invention as claimed. Hence, Applicants submit respectfully that the combination of the cited references fails to meet the threshold required for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103(a).

Accordingly, Applicants submit respectfully that the rejection of Claims 15 and 17 under 35 U.S.C. § 103(a) have been overcome, and Applicants request respectfully that the rejection of Claims 15 and 17 under 35 U.S.C. § 103(a) be withdrawn.

IV. Rejection Under 35 U.S.C. § 112, Fourth Paragraph

At page 2 of the Office Action, Claim 16 is rejected under 35 U.S.C. § 112, fourth paragraph, as allegedly being indefinite for failing to point out particularly and claim distinctly the subject matter regarded as the invention. The Office Action alleges that Claim 16 requires "up to 90% by weight" of the microparticles, based upon the total weight of the oral hygiene product, but that this included 0%, whereas Claim 13, from which Claim 16 depends, requires that the microparticles are in the product. Applicants traverse respectfully.

Without acquiescing in the propriety of rejection, and solely to advance prosecution of the present application, Claim 16 is amended herein to recite that the microspheres of the present invention as claimed are present in the oral hygiene product, as required by Examiner. Being present in the oral hygiene product requires that the microspheres make up greater than 0% of the

weight of the oral hygiene product, thus eliminating the possibility that 0% is within the range claimed. Thus, Applicants submit respectfully that the rejection has been overcome, and Applicants request respectfully that the 35 U.S.C. § 112, fourth paragraph, rejection of Claim 16 be withdrawn.

V. Rejection Under 35 U.S.C. § 112, Second Paragraph

At page 2 of the Office Action, Claim 25 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for allegedly failing to state the claimed element that is water insoluble and unbranched. The Office Action suggests that it appears that the term “polyglucan” was inadvertently omitted. Applicants traverse respectfully.

Without acquiescing in the propriety of rejection, and solely to advance prosecution of the present application, Claim 25 is amended herein to add the clarifying recitation, “unbranched poly- α -glucan, poly-1,3- β -glucan, or mixtures thereof” Accordingly, Applicants suggest respectfully that the rejection has been overcome, and Applicants request respectfully that the 35 U.S.C. § 112, second paragraph, rejection of Claim 25 be withdrawn.

CONCLUSION

Applicants submit respectfully that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

Applicants’ undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All correspondence should be directed to our address given below.

AUTHORIZATION

Applicants believe there is no fee due in connection with this filing. However, to the extent required, the Commissioner is hereby authorized to charge any fees due in connection with this filing to Deposit Account 50-1710 or credit any overpayment to same.

Respectfully submitted,



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